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TITLE: 2,6-Di:fluoro-tolan derivs. - useful as components of liq. crystal media for electro-optical displays

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INVENTOR-INFORMATION:

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ABSTRACT:

CHG DATE=19990617 STATUS=O>2,6-Difluorotolans of formula (I) are claimed. R1, R2= 1-18C alk(en)yl, opt. with 1 or 2 non-adjacent CH2 gps. replaced by O, S, COO or OCO; one of these gps. can also = F, Cl, CN, CF3, OCF3 or OCF2H; A1, A2= 1,4-cyclohexylene, 1,4-phenylene, 2- or 3-fluoro-1,4-phenylene, 2,3-difluoro-1,4-phenylene, 2,6- or 3,5-difluorophenylene, dioxan-2,5-diyl, pyridine-2,5-diyl or pyrimidine-2,5-diyl; Z1, Z2= -CH2CH2-, -(CH2)4-, -CH2O-, -OCH2-, -CC- or a single bond; m, p = 0, 1 or 2; o= 0, 1 or 2. USE/ADVANTAGE - (I) are useful as components of liq. crystal (LC) media for electro-optical displays. Also claimed are LC media with at least 2 components, at least one of which contains a 2,6-difluorotolan gp. as in (I), pref. a cpd. of formula (I), and electro-optical displays contg. such LC media. The incorporation of (I) gives stable LC media with relatively high optical anisotropy and pronounced positive dielectric anisotropy, useful esp. in TNC-based display elements; cpds. (I) have high chemical, thermal and light stability, and form LC mesophases in the relevant temp. range.